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     (FILE 'HOME' ENTERED AT 21:18:46 ON 10 JAN 2004)

     FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, CANCERLIT, JAPIO' ENTERED AT
     21:19:13 ON 10 JAN 2004
L1             0 S APATMER AND PCR
L2           172 S APTAMER AND PCR
L3            16 S L2 AND QUANT?
L4            12 DUPLICATE REMOVE L3 (4 DUPLICATES REMOVED)

=>
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updated search
priority date 6/17/99
L4 dates no good.

ANSWER 4 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1995:418991 CAPLUS
DN 122:206383
ED Entered STN: 16 Mar 1995
TI Quantitative polymerase chain reaction using a DNA hybridization assay based on surface-activated microplates
AU Berndt, Christoph; Bebenroth, Marion; Oehlschlegel, Kerstin; Hiepe, Falk; Schoessler, Werner
CS Inst. of Pathological and Clinical Biochemistry, Univ. Hospital Charite, Berlin, D-10098, Germany
SO Analytical Biochemistry (1995), 225(2), 252-7
CODEN: ANBCA2; ISSN: 0003-2697
PB Academic
DT Journal
LA English
CC 3-1 (Biochemical Genetics)
Section cross-reference(s): 9
AB A method for DNA quantification on microplates based on the hybridization between single-stranded target and solid-phase bound capture DNA is presented. **Binding** of the capture DNA to the microplates was attained by surface activation using organosilanes. Detection of hybridization DNA was performed by an enzyme-linked assay taking advantage of the labeled target DNA. Basic test characteristics are described and application examples are given demonstrating its feasibility for a quant. PCR (**QPCR**). The **QPCR** was carried out by coamplifying an Ig complementarity determining region 3 (CDR3)-coding plasmid DNA with a synthetic internal standard (IS). IS and plasmid CDR3 both shared primer **binding** sites and produced length-identical amplicons. The amplified DNA was quantified following differential hybridization with IS- and plasmid-specific capture probes. Based on the product ratios of plasmid to IS, the initial amts. of plasmid DNA were calculated This way, **QPCR** was shown to be capable of detecting initial concentration differences of plasmid DNA of about 30%.
ST quant PCR DNA hybridization activated microplate
IT Polymerase chain reaction
(quant. polymerase chain reaction using a DNA hybridization assay based on surface-activated microplates)
IT Deoxyribonucleic acids
RL: ANT (Analyte); ANST (Analytical study)
(quant. polymerase chain reaction using a DNA hybridization assay based on surface-activated microplates)
IT Immunoglobulins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(quant. polymerase chain reaction was carried out by coamplifying an Ig complementarity determining region 3-coding plasmid DNA with an internal std producing length-identical amplicons which were than quantified by differential hybridization)
IT **Nucleic** acid hybridization
(DNA-DNA, quant. polymerase chain reaction using a DNA hybridization assay based on surface-activated microplates)
IT Genetic element
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(amplicon, quant. polymerase chain reaction was carried out by coamplifying an Ig complementarity determining region 3-coding plasmid DNA with an internal std producing length-identical amplicons which were than quantified by differential hybridization)

L4 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:417908 CAPLUS
DN 139:3179
ED Entered STN: 01 Jun 2003
TI Methods and kits for proximity probing and their use in drug screening and detection of pathogens
IN Fredriksson, Simon
PA Swed.
SO PCT Int. Appl., 30 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C12Q001-68
ICS G01N033-536
CC 9-1 (Biochemical Methods)
Section cross-reference(s): 1, 3, 14
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2003044231	A1	20030530	WO 2002-SE2133	20021122

W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI SE 2001-3905	A	20011123	
SE 2002-1140	A	20020412	

AB The present invention relates to sensitive, rapid and convenient assays for detection and or **quantification** of one or more analyte(s) in soln. using multivalent proximity probes. The proximity probes each comprise several binding moieties, such as antibodies, and assocd. nucleic acid(s). When the binding moieties have bound to their analyte(s), the nucleic acids on opposite proximity probes interact with each other and a signal is generated based on this interaction. The multivalent proximity probes are esp. valuable for highly sensitive and specific protein detection and may be used if detection of pathogens and for drug screening.
ST kit proximity probe antibody **aptamer** library pathogen drug screening; detection pathogen kit proximity probe
IT Ligands
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(-receptor interaction antagonists; methods and kits for proximity probing and their use in drug screening and detection of pathogens)
IT Prion proteins
RL: ANT (Analyte); ANST (Analytical study)
(PrPSc; methods and kits for proximity probing and their use in drug screening and detection of pathogens)
IT Proteins
RL: ANT (Analyte); ANST (Analytical study)
(aggregates; methods and kits for proximity probing and their use in drug screening and detection of pathogens)
IT Peptides, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(**aptamer**; methods and kits for proximity probing and their use in drug screening and detection of pathogens)
IT Polymers, uses

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(backbone, probes contg.; methods and kits for proximity probing and their use in drug screening and detection of pathogens)

IT Receptors
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(cell surface, sol.; methods and kits for proximity probing and their use in drug screening and detection of pathogens)

IT Ribosome
(display, binding moieties of probes selected from; methods and kits for proximity probing and their use in drug screening and detection of pathogens)

IT Immunoglobulins
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(fragments, Fc; methods and kits for proximity probing and their use in drug screening and detection of pathogens)

IT Pathogen
(infectious agents; methods and kits for proximity probing and their use in drug screening and detection of pathogens)

IT Affinity
Animal
Combinatorial library
Dimerization
Drug screening
Nucleic acid amplification (method)
Nucleic acid hybridization
Nucleic acid library
PCR (polymerase chain reaction)
Phage display library
Solutions
Test kits
(methods and kits for proximity probing and their use in drug screening and detection of pathogens)

IT Nucleic acids
RL: ANT (Analyte); ANST (Analytical study)
(methods and kits for proximity probing and their use in drug screening and detection of pathogens)

IT Agglutinins and Lectins
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(methods and kits for proximity probing and their use in drug screening and detection of pathogens)

IT Antibodies
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(methods and kits for proximity probing and their use in drug screening and detection of pathogens)

IT Carbohydrates, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(methods and kits for proximity probing and their use in drug screening and detection of pathogens)

IT Primers (nucleic acid)
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(methods and kits for proximity probing and their use in drug screening and detection of pathogens)

IT Probes (nucleic acid)
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(methods and kits for proximity probing and their use in drug screening and detection of pathogens)

IT Reagents
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(methods and kits for proximity probing and their use in drug screening and detection of pathogens)

IT Antibodies
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)

(monoclonal; methods and kits for proximity probing and their use in drug screening and detection of pathogens)

IT Genetic methods
(ribosome display; methods and kits for proximity probing and their use in drug screening and detection of pathogens)

IT 9004-10-8, Insulin, analysis 127464-60-2, Vascular endothelial growth factor
RL: ANT (Analyte); ANST (Analytical study)
(methods and kits for proximity probing and their use in drug screening and detection of pathogens)

IT 58-85-5D, Biotin, probe conjugate 9013-20-1D, Streptavidin, oligonucleotide conjugate 37353-39-2, Polynucleotide ligase
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(methods and kits for proximity probing and their use in drug screening and detection of pathogens)

IT 532767-92-3, 1: PN: WO03044231 PAGE: 16 unclaimed DNA 532767-93-4, 2: PN: WO03044231 PAGE: 16 unclaimed DNA 532767-94-5 532767-95-6 532767-96-7 532767-97-8
RL: PRP (Properties)
(unclaimed nucleotide sequence; methods and kits for proximity probing and their use in drug screening and detection of pathogens)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Jianghong, R; Science 1998, V280, P708
(2) Landegren, U; WO 0161037 A1 2001 CAPLUS
(3) Michael, M; Nature biotechnology, http://biotech.nature.com 2001, V19, P958
(4) Simon, F; Nature biotechnology, http://biotech.nature.com 2002, V20, P473

4 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:22595 CAPLUS
DN 138:84566
ED Entered STN: 10 Jan 2003
TI Protein, cDNA and gene sequence of novel endothelially expressed L119 proteins and their therapeutic uses
IN Scheek, Sigrid; Hiemisch, Holger; Lanahan, Anthony; Regard, Jean B.; Worley, Paul F.; Krupp, Eckart; Schwaninger, Markus; Faraday, Nauder
PA Axaron Bioscience AG, Germany
SO PCT Int. Appl., 227 pp.
CODEN: PIXXD2
DT Patent
LA English
ICI C07
CC 3-3 (Biochemical Genetics)
Section cross-reference(s): 1, 6, 13, 15
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003001863	A2	20030109	WO 2002-EP6770	20020619
	WO 2003001863	A3	20030731		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	DE 10130657	A1	20030116	DE 2001-10130657	20010627
PRAI	DE 2001-10130657	A	20010627		

AB The present invention relates to novel, specifically expressed proteins and to nucleic acid sequences or transgenic nucleic acids constructs which encode the proteins L119. The invention also relates to transgenic organisms or animals which harbor the nucleic acid sequences or recombinant nucleic acid constructs and also to monoclonal or polyclonal antibodies and binding factors which are directed against the isolated proteins L119. The invention furthermore relates to a process for finding substances which possess specific finding affinity with the proteins according to the invention, and to a process for qual. or **quant.** detecting the nucleic acid sequences according to the invention or the proteins according to the invention. The invention furthermore relates to the use of nucleic acid sequences and proteins. The invention also encompasses processes for finding substances which modulate the function of the proteins according to the invention. It also relates to the use of these proteins for producing drugs.
ST human rat mouse protein L119 cDNA gene sequence; gene therapy drug screening antibody endothelium endothelium human
IT Primers (nucleic acid)
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(DNA; protein, cDNA and gene sequence of novel endothelially expressed L119 proteins and their therapeutic uses)
IT Gene, animal
RL: BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(L119; protein, cDNA and gene sequence of novel endothelially expressed L119 proteins and their therapeutic uses)
IT Samples
(biol.; protein, cDNA and gene sequence of novel endothelially

expressed L119 proteins and their therapeutic uses)

IT Chemistry
(chem. compds., low mol. wt., library of; protein, cDNA and gene sequence of novel endothelially expressed L119 proteins and their therapeutic uses)

IT Antibodies
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(complexes, antibody/antigen complex; protein, cDNA and gene sequence of novel endothelially expressed L119 proteins and their therapeutic uses)

IT Mutation
(deletion; protein, cDNA and gene sequence of novel endothelially expressed L119 proteins and their therapeutic uses)

IT Blood vessel
(endothelium; protein, cDNA and gene sequence of novel endothelially expressed L119 proteins and their therapeutic uses)

IT Immunoassay
(enzyme-linked immunosorbent assay; protein, cDNA and gene sequence of novel endothelially expressed L119 proteins and their therapeutic uses)

IT cDNA sequences
(for mouse, rat and human protein gene L119; protein, cDNA and gene sequence of novel endothelially expressed L119 proteins and their therapeutic uses)

IT Immunoglobulins
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(fragments; protein, cDNA and gene sequence of novel endothelially expressed L119 proteins and their therapeutic uses)

IT Proteins
RL: BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gene L119; protein, cDNA and gene sequence of novel endothelially expressed L119 proteins and their therapeutic uses)

IT Sequence homology analysis
(gene; protein, cDNA and gene sequence of novel endothelially expressed L119 proteins and their therapeutic uses)

IT Disease, animal
(genetic, human; protein, cDNA and gene sequence of novel endothelially expressed L119 proteins and their therapeutic uses)

IT Immunoassay
(immunoblotting; protein, cDNA and gene sequence of novel endothelially expressed L119 proteins and their therapeutic uses)

IT Immunoassay
(immunopptn.; protein, cDNA and gene sequence of novel endothelially expressed L119 proteins and their therapeutic uses)

IT Genetic element
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(insertion of, transgene alteration by; protein, cDNA and gene sequence of novel endothelially expressed L119 proteins and their therapeutic uses)

IT Mutation
(insertion; protein, cDNA and gene sequence of novel endothelially expressed L119 proteins and their therapeutic uses)

IT Measuring apparatus
(microphysiometer; protein, cDNA and gene sequence of novel endothelially expressed L119 proteins and their therapeutic uses)

IT Antibodies
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(monoclonal; protein, cDNA and gene sequence of novel endothelially

expressed L119 proteins and their therapeutic uses)

IT Molecular weight
Nucleic acid library
(of low mol. wt. compds.; protein, cDNA and gene sequence of novel endothelially expressed L119 proteins and their therapeutic uses)

IT Protein sequences
(of mouse, rat and human gene L119 protein; protein, cDNA and gene sequence of novel endothelially expressed L119 proteins and their therapeutic uses)

IT DNA sequences
(of mouse, rat and human gene L119; protein, cDNA and gene sequence of novel endothelially expressed L119 proteins and their therapeutic uses)

IT Gamete and Germ cell
(of transgenic animal; protein, cDNA and gene sequence of novel endothelially expressed L119 proteins and their therapeutic uses)

IT DNA
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(primer; protein, cDNA and gene sequence of novel endothelially expressed L119 proteins and their therapeutic uses)

IT Affinity chromatography
Aptamers
Drug screening
Drugs
Gene therapy
Genetic markers
Genetic polymorphism
Human
Molecular cloning
Molecular modeling
Nucleic acid amplification (method)
Nucleic acid hybridization
PCR (polymerase chain reaction)
Phage display
Plasmid vectors
Protein motifs
Susceptibility (genetic)
Transformation, genetic
(protein, cDNA and gene sequence of novel endothelially expressed L119 proteins and their therapeutic uses)

IT Antisense nucleic acids
Double stranded RNA
Oligonucleotides
Reporter gene
Ribozymes
Transcription factors
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(protein, cDNA and gene sequence of novel endothelially expressed L119 proteins and their therapeutic uses)

IT Genetic element
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(regulatory; protein, cDNA and gene sequence of novel endothelially expressed L119 proteins and their therapeutic uses)

IT Antibodies
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(selection; protein, cDNA and gene sequence of novel endothelially expressed L119 proteins and their therapeutic uses)

IT Antibodies
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL

(Biological study); USES (Uses)
(single chain; protein, cDNA and gene sequence of novel endothelially expressed L119 proteins and their therapeutic uses)

IT Animal cell
(somatic; protein, cDNA and gene sequence of novel endothelially expressed L119 proteins and their therapeutic uses)

IT Mutation
(substitution; protein, cDNA and gene sequence of novel endothelially expressed L119 proteins and their therapeutic uses)

IT Recombination, genetic
(transgene alteration by; protein, cDNA and gene sequence of novel endothelially expressed L119 proteins and their therapeutic uses)

IT Animal
(transgenic; protein, cDNA and gene sequence of novel endothelially expressed L119 proteins and their therapeutic uses)

IT Genetic methods
(two-hybrid screening, N-hybrid system; protein, cDNA and gene sequence of novel endothelially expressed L119 proteins and their therapeutic uses)

IT Nucleic acids
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.alpha.-anomeric; protein, cDNA and gene sequence of novel endothelially expressed L119 proteins and their therapeutic uses)

IT 483282-56-0 483282-57-1 483282-58-2 483282-59-3 483282-61-7
483282-63-9 483282-65-1 483282-67-3 483386-60-3, Protein (rat gene L119 246-amino acid) 483386-63-6, Protein (human gene L119 297-amino acid) 483386-64-7, Protein (human gene L119 246-amino acid)
483386-67-0, Protein (mouse gene L119 246-amino acid)
RL: BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(amino acid sequence; protein, cDNA and gene sequence of novel endothelially expressed L119 proteins and their therapeutic uses)

IT 483386-58-9 483386-59-0 483386-61-4 483386-62-5 483386-65-8
483386-66-9
RL: BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nucleotide sequence; protein, cDNA and gene sequence of novel endothelially expressed L119 proteins and their therapeutic uses)

IT 483395-00-2 483395-01-3 483395-02-4 483395-03-5 483395-04-6
483395-05-7 483395-06-8 483395-07-9 483395-08-0 483395-09-1
483395-10-4 483395-11-5 483395-12-6 483395-13-7 483395-14-8
483395-15-9 483395-16-0 483395-17-1 483395-18-2 483395-19-3
483395-20-6 483395-21-7 483395-22-8 483395-23-9 483395-24-0
483395-25-1 483395-26-2 483395-27-3 483395-28-4 483395-29-5
483395-30-8 483395-31-9 483395-32-0 483395-33-1 483395-34-2
483395-35-3 483395-36-4 483395-37-5 483395-38-6 483395-39-7
483395-40-0 483395-41-1 483395-42-2
RL: PRP (Properties)
(unclaimed nucleotide sequence; protein, cDNA and gene sequence of novel endothelially expressed L119 proteins and their therapeutic uses)

L4 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:836499 CAPLUS
DN 139:318392
ED Entered STN: 24 Oct 2003
TI Detection of an analyte protein using a cognate binding partner labeled with a nucleic acid
IN Burbulis, Ian E.; Carlson, Robert H.
PA The Molecular Sciences Institute, Inc., USA
SO U.S. Pat. Appl. Publ., 41 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM C12Q001-68
ICS G01N033-53; C12P021-04; C12P019-34; C12N015-87
NCL 435006000; 435007100; 435069700; 435320100; 435325000; 435455000; 435091200
CC 3-1 (Biochemical Genetics)
Section cross-reference(s): 9
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2003198973	A1	20031023	US 2002-218233	20020812
WO 2003091404	A2	20031106	WO 2003-US12797	20030423
WO 2003091404	A3	20031211		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 2002-374795P P 20020423
US 2002-218233 A 20020812

AB A method for detecting a specific protein that uses a specific binding partner for the target protein that is labeled a nucleic acid reporter is described. The nucleic acid is conjugated to the protein via a linker contg. a ribonucleotide that includes a bond labile to a nuclease such as an RNA or a restriction enzyme. The labeled mol. is incubated with a sample adsorbed onto a surface and bound by the absorbed analyte. The nucleic acid moiety is then released by treatment with nuclease and can be amplified, e.g. by **PCR**, with the yield of the amplification product being proportional to the **quantity** of target analyte in the sample.

ST protein detection peptide ligand oligonucleotide conjugate amplification

IT Nucleotides, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(3'-phosphoramidites, in prepn. nucleic acid protein conjugates; detection of analyte protein using cognate binding partner labeled with nucleic acid)

IT Promoter (genetic element)
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(T7, in reporter oligonucleotides; detection of analyte protein using cognate binding partner labeled with nucleic acid)

IT Peptides, preparation
Proteins
RL: ARG (Analytical reagent use); PNU (Preparation, unclassified); ANST (Analytical study); PREP (Preparation); USES (Uses)
(conjugates, with nucleic acids; detection of analyte protein using

cognate binding partner labeled with nucleic acid)

IT Oligonucleotides
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(conjugates, with proteins; detection of analyte protein using cognate binding partner labeled with nucleic acid)

IT Amide group
(derivatization of proteins at; detection of analyte protein using cognate binding partner labeled with nucleic acid)

IT Thiols (organic), reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(derivatization of proteins at; detection of analyte protein using cognate binding partner labeled with nucleic acid)

IT Nucleic acid amplification (method)
Test kits
(detection of analyte protein using cognate binding partner labeled with nucleic acid)

IT **PCR** (polymerase chain reaction)
Transcription, genetic
(for amplification of reporter nucleic acid; detection of analyte protein using cognate binding partner labeled with nucleic acid)

IT Primers (nucleic acid)
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(for amplification of reporter nucleic acid; detection of analyte protein using cognate binding partner labeled with nucleic acid)

IT Inteins
RL: ARG (Analytical reagent use); PNU (Preparation, unclassified); ANST (Analytical study); PREP (Preparation); USES (Uses)
(fusion products, nucleic acid conjugates; detection of analyte protein using cognate binding partner labeled with nucleic acid)

IT **Aptamers**
(oligonucleotide conjugates; detection of analyte protein using cognate binding partner labeled with nucleic acid)

IT 9001-99-4, RNase
RL: CAT (Catalyst use); USES (Uses)
(RNase, in cleavage of protein nucleic acid conjugate; detection of analyte protein using cognate binding partner labeled with nucleic acid)

IT 52-90-4, L-Cysteine, reactions 1173-82-6D, DUTP, aminoacyl derivs.
RL: RCT (Reactant); RACT (Reactant or reagent)
(conjugation of nucleic acids to proteins at; detection of analyte protein using cognate binding partner labeled with nucleic acid)

IT 80498-17-5, Restriction endonuclease EcoRI
RL: CAT (Catalyst use); USES (Uses)
(in cleavage of protein nucleic acid conjugate; detection of analyte protein using cognate binding partner labeled with nucleic acid)

IT 5961-85-3, Tris-(2-carboxyethyl)phosphine
RL: RCT (Reactant); RACT (Reactant or reagent)
(in hydrolysis of intein fusion proteins; detection of analyte protein using cognate binding partner labeled with nucleic acid)

IT 108-98-5, Thiophenol, reactions 3375-50-6, Mercaptoethanesulfonic acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(in prepn. nucleic acid protein conjugates; detection of analyte protein using cognate binding partner labeled with nucleic acid)

L4 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1
AN 2003:797110 CAPLUS
DN 139:393082
ED Entered STN: 12 Oct 2003
TI Using DNA-binding proteins as an analytical tool
AU Berezovski, Maxim; Krylov, Sergey N.
CS Department of Chemistry, York University, Toronto, ON, M3J 1P3, Can.
SO Journal of the American Chemical Society (2003), 125(44), 13451-13454
CODEN: JACSAT; ISSN: 0002-7863
PB American Chemical Society
DT Journal
LA English
CC 9-16 (Biochemical Methods)
Section cross-reference(s): 3, 6
AB We propose that DNA-binding proteins can be used as highly efficient and versatile tools in analyses of DNA, RNA, and proteins. This work reports assays applying specific affinity probes:hybridization probes for analyses of DNA and RNA, and **aptamer** probes for analyses of proteins. Both types of probes are single-stranded DNA. In affinity analyses, in general, the probe (P) binds to a target mol. (T), and the amts. of the probe-target complex (P.cntdot.T) and unbound P are detd. Distinguishing between P and P.cntdot.T can be achieved by electrophoretic sepn. If the electrophoretic mobilities of P and P.cntdot.T are close in gel-free media, which is always the case for hybridization analyses, sepn. typically requires the use of a sieving matrix. Here we utilized a single-stranded DNA binding protein (SSB) to facilitate highly efficient gel-free sepn. of P and P.cntdot.T in capillary electrophoresis (CE) for three types of targets: DNA, RNA, and proteins. When present in the CE run buffer, SSB binds differently to P and P.cntdot.T. Due to this selective binding, SSB induces difference in electrophoretic mobilities of P and P.cntdot.T in an SSB concn.-dependent fashion. The difference in the electrophoretic mobilities allows for affinity analyses of DNA, RNA, and proteins in gel-free CE. The large no. of well-characterized DNA- and RNA-binding proteins and the diversity of their properties will allow researchers to design a comprehensive tool set for **quant.** analyses of DNA, RNA, and proteins. Such analyses will facilitate identification of genomic DNA in ultra-small samples without error-prone and time-consuming **PCR**. They can also be used for monitoring gene expression at both mRNA and protein levels.
ST DNA binding protein analytical tool
IT Proteins
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(RNA-binding; using DNA-binding proteins as an anal. tool)
IT Proteins
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(single-stranded DNA-binding; using DNA-binding proteins as an anal. tool)
IT Capillary electrophoresis
Nucleic acid hybridization
PCR (polymerase chain reaction)
(using DNA-binding proteins as an anal. tool)
IT DNA
Proteins
RNA
RL: ANT (Analyte); ANST (Analytical study)
(using DNA-binding proteins as an anal. tool)
RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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4 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:927182 CAPLUS
DN 138:20514
ED Entered STN: 06 Dec 2002
TI Adipose abundant proteins (AAPs) from human and mouse, their cDNA cloning and mRNA expression and chromosome mapping, and therapeutic use thereof
IN Adams, Sean H.
PA Genentech, Inc., USA
SO PCT Int. Appl., 134 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K
CC 3-3 (Biochemical Genetics)
Section cross-reference(s): 1, 6, 13
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002096355	A2	20021205	WO 2002-US16496	20020524
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	US 2003113327	A1	20030619	US 2002-155895	20020524
PRAI	US 2001-293775P	P	20010525		
	US 2002-155895	A	20020524		

AB The invention provides protein and cDNA sequences for a novel adipose abundant protein (AAP) from human and mouse. In particular, disclosed are three variants of human AAP cDNAs (1.5kb, 1.9kb, and 2.7kb resp.) encoding the same AAP protein but with different length in 3' untranslated region (UTR) or 5' UTR. In addn., a 3.1kb cDNA fragment encoding mouse AAP 150-amino acid C-terminal fragment is also provided. The abundance of AAP mRNA in mice and human tissues are **quantitated** by real-time **PCR**, which indicates 207% expression in human adipocyte, 100-566% expression in mouse BAT and WAT compared to about 1% expression in other tissues in general. The human AAP gene is mapped to Chromosome 17p13, while mouse AAP gene is localized near the markers D11Mit322 and D1Mit116 on Chromosome 11. AAP gene or proteins, related peptides, and antibodies useful in treating metabolic disorders or disorders assocd. with changes in adipose tissue physiol. function or mass.

ST human mouse adipose abundant protein AAP cDNA sequence; mapping cloning AAP gene expression obesity metabolic disorder treatment

IT Proteins
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(AAP (adipose abundant protein); adipose abundant proteins (AAPs) from human and mouse, their cDNA cloning and mRNA expression and chromosome mapping, and therapeutic use thereof)

IT Animal tissue
(AAP expression profile in; adipose abundant proteins (AAPs) from human and mouse, their cDNA cloning and mRNA expression and chromosome mapping, and therapeutic use thereof)

IT Adipose tissue
(BAT or WAT, AAP abundant expression detection in; adipose abundant proteins (AAPs) from human and mouse, their cDNA cloning and mRNA expression and chromosome mapping, and therapeutic use thereof)

IT Adipose tissue
(adipocyte, AAP abundant expression detection in; adipose abundant proteins (AAPs) from human and mouse, their cDNA cloning and mRNA expression and chromosome mapping, and therapeutic use thereof)
IT Genetic mapping
Human
Molecular cloning
Mouse
Protein sequences
cDNA sequences
(adipose abundant proteins (AAPs) from human and mouse, their cDNA cloning and mRNA expression and chromosome mapping, and therapeutic use thereof)
IT Cell differentiation
(adipose, modulation through AAP modulators; adipose abundant proteins (AAPs) from human and mouse, their cDNA cloning and mRNA expression and chromosome mapping, and therapeutic use thereof)
IT Antibodies
RL: ARG (Analytical reagent use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(anti-AAP; adipose abundant proteins (AAPs) from human and mouse, their cDNA cloning and mRNA expression and chromosome mapping, and therapeutic use thereof)
IT Infection
(bacterial, treatment using AAP or its modulators; adipose abundant proteins (AAPs) from human and mouse, their cDNA cloning and mRNA expression and chromosome mapping, and therapeutic use thereof)
IT Gene, animal
RL: BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cDNA for AAP (adipose abundant protein); adipose abundant proteins (AAPs) from human and mouse, their cDNA cloning and mRNA expression and chromosome mapping, and therapeutic use thereof)
IT Metabolism, animal
(disorder, treatment using AAP or its modulators; adipose abundant proteins (AAPs) from human and mouse, their cDNA cloning and mRNA expression and chromosome mapping, and therapeutic use thereof)
IT Genetic vectors
(expressing recombinant AAP; adipose abundant proteins (AAPs) from human and mouse, their cDNA cloning and mRNA expression and chromosome mapping, and therapeutic use thereof)
IT Drug screening
(for AAP transcriptional modulators; adipose abundant proteins (AAPs) from human and mouse, their cDNA cloning and mRNA expression and chromosome mapping, and therapeutic use thereof)
IT Chromosome
(human 17, 17p13, AAP gene on; adipose abundant proteins (AAPs) from human and mouse, their cDNA cloning and mRNA expression and chromosome mapping, and therapeutic use thereof)
IT Promoter (genetic element)
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(inducible, in regulation of recombinant AAP expression; adipose abundant proteins (AAPs) from human and mouse, their cDNA cloning and mRNA expression and chromosome mapping, and therapeutic use thereof)
IT Chromosome
(mouse 11, AAP gene on; adipose abundant proteins (AAPs) from human and mouse, their cDNA cloning and mRNA expression and chromosome mapping, and therapeutic use thereof)
IT mRNA
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)

(tissue expression profile of; adipose abundant proteins (AAPs) from human and mouse, their cDNA cloning and mRNA expression and chromosome mapping, and therapeutic use thereof)

IT **Aptamers**
(to AAP, to reduce AAP gene expression; adipose abundant proteins (AAPs) from human and mouse, their cDNA cloning and mRNA expression and chromosome mapping, and therapeutic use thereof)

IT Antisense nucleic acids
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(to AAP, to reduce AAP gene expression; adipose abundant proteins (AAPs) from human and mouse, their cDNA cloning and mRNA expression and chromosome mapping, and therapeutic use thereof)

IT Mouse
(transgenic, expressing AAP; adipose abundant proteins (AAPs) from human and mouse, their cDNA cloning and mRNA expression and chromosome mapping, and therapeutic use thereof)

IT Cachexia
Neoplasm
Obesity
(treatment using AAP or its modulators; adipose abundant proteins (AAPs) from human and mouse, their cDNA cloning and mRNA expression and chromosome mapping, and therapeutic use thereof)

IT Infection
(viral, treatment using AAP or its modulators; adipose abundant proteins (AAPs) from human and mouse, their cDNA cloning and mRNA expression and chromosome mapping, and therapeutic use thereof)

IT 477827-02-4P 477827-04-6P
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(amino acid sequence; adipose abundant proteins (AAPs) from human and mouse, their cDNA cloning and mRNA expression and chromosome mapping, and therapeutic use thereof)

IT 477826-99-6 477827-00-2 477827-01-3 477827-03-5
RL: BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nucleotide sequence; adipose abundant proteins (AAPs) from human and mouse, their cDNA cloning and mRNA expression and chromosome mapping, and therapeutic use thereof)

IT 9014-24-8, Rna polymerase
RL: BUU (Biological use, unclassified); CAT (Catalyst use); BIOL (Biological study); USES (Uses)
(to detect AAP expression in drug screening; adipose abundant proteins (AAPs) from human and mouse, their cDNA cloning and mRNA expression and chromosome mapping, and therapeutic use thereof)

IT 477828-12-9 477828-13-0 477828-14-1 477828-15-2 477828-16-3 477828-17-4
RL: PRP (Properties)
(unclaimed nucleotide sequence; adipose abundant proteins (AAPs) from human and mouse, their cDNA cloning and mRNA expression and chromosome mapping, and therapeutic use thereof)

L4 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:332611 CAPLUS
DN 136:337369
ED Entered STN: 03 May 2002
TI Real time **quantitative aptamer-PCR** or immuno-**PCR** with detectable non-primer probes
IN Dodge, Anthony H.; Meng, Yu-ju G.; Sims, Paul W.; Sinicropi, Dominick V.; Williams, P. Mickey; Wong, Wai Lee
PA USA
SO U.S. Pat. Appl. Publ., 37 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM C12Q001-68
ICS C07H021-02; C07H021-04; C12P019-34
NCL 435006000
CC 9-16 (Biochemical Methods)
Section cross-reference(s): 3
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2002051974	A1	20020502	US 1999-449204	19991124
PRAI US 1998-110259P	P	19981130		

AB The invention relates to a method for a novel method for detecting the presence of a target compd., in a sample which may contain the target compd., using a nucleic acid detector mol., amplification and **quantitation** or detection of the detector mol. The method uses the following steps: (a) exposing a sample, which may contain or is suspected of contg. the target compd., to a capture mol. capable of binding to the target mol. to form a capture mol.: target mol. complex; (b) adding to the capture mol.: target mol. complex, a detector mol. contg. a nucleic acid moiety and capable of specifically binding to the target mol.; and (c) amplifying the nucleic acid moiety by **PCR** amplification, and (d) **quantitating** or detecting the **PCR** amplified nucleic acid moiety using a detectable non-primer probe capable of binding to the nucleic acid moiety. In the method of the invention, the capture mol. may be an antibody, phage antibody, **aptamer** or other receptor or binding partner for the analyte of interest. The detector mol. may be either a nucleic acid labeled antibody or an **aptamer** capable of binding to the target mol. **Quantification** is achieved by detecting the amplified nucleic acid (nucleic acid moiety on the labeled antibody or **aptamer**) with a detectable non-primer probe capable of binding to the amplified nucleic acid, preferably in real time. The invention, therefore, provides improvements in **quantitation** and sensitivity over immuno-**PCR** and ELONA assays which have been used for protein analytes, by utilizing a **PCR** amplification and **quantification** technic used only for application to the real time detection of nucleic acids. The invention also provides improvements over conventional ELISA assays in sensitivity. The use of non-primer probes, preferably with real time anal., e.g., the TaqMang system, in an **aptamer-PCR** or an immuno-**PCR** assay as in the invention, overcomes the shortcomings of prior art processes discuss above. Since the **PCR** reaction products are not subjected to post-**PCR** manipulations, the risk of product contamination in assays is significantly lowered. Monitoring the **PCR** reaction in 'real time' allows the collection of data across many cycles (e.g. cycle 1-50) instead of at an endpoint **PCR** stage, as in conventional immuno-**PCR** (e.g. cycle 25 only), therefore allowing for a greater range of detectable amplicon. The method of the invention can detect the target mol. at a concn. of less than 1.0x10-1-g/mL, generally about 1.0x10-15 to about 1.0x10-8 g/mL. Detecting vascular endothelial growth factor (VEGF) using the

aptamer rt-**PCR** assay of the invention is described.

ST **aptamer PCR** real time **quant** immuno nonprimer probes

IT **PCR** (polymerase chain reaction)
(RT-**PCR** (reverse transcription-**PCR**); real time **quant**. **aptamer**-**PCR** or immuno-**PCR** with detectable non-primer probes)

IT Animal tissue
Blood serum
Bronchi
Cerebrospinal fluid
Semen
Sputum
(anal.; real time **quant**. **aptamer**-**PCR** or immuno-**PCR** with detectable non-primer probes)

IT Receptors
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(as detector mol.; real time **quant**. **aptamer**-**PCR** or immuno-**PCR** with detectable non-primer probes)

IT Hormones, animal, analysis
RL: ANT (Analyte); ANST (Analytical study)
(glycoprotein; real time **quant**. **aptamer**-**PCR** or immuno-**PCR** with detectable non-primer probes)

IT Fluorescent dyes
(label; real time **quant**. **aptamer**-**PCR** or immuno-**PCR** with detectable non-primer probes)

IT Antibodies
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(labeled, DNA labeled, capture mol.; real time **quant**. **aptamer**-**PCR** or immuno-**PCR** with detectable non-primer probes)

IT Nucleic acids
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(ligand, as detector mol.; real time **quant**. **aptamer**-**PCR** or immuno-**PCR** with detectable non-primer probes)

IT RNA
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(nucleic acid detector; real time **quant**. **aptamer**-**PCR** or immuno-**PCR** with detectable non-primer probes)

IT Ligands
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(nucleic acid, **aptamer**, capture mol.; real time **quant**. **aptamer**-**PCR** or immuno-**PCR** with detectable non-primer probes)

IT Growth factors, animal
RL: ANT (Analyte); ANST (Analytical study)
(osteoglycins; real time **quant**. **aptamer**-**PCR** or immuno-**PCR** with detectable non-primer probes)

IT Blood analysis
Immobilization, molecular or cellular
PCR (polymerase chain reaction)
Urine analysis
(real time **quant**. **aptamer**-**PCR** or immuno-**PCR** with detectable non-primer probes)

IT Cytokines
Growth factors, animal
Hemopoietins

Hepatocyte growth factor
Integrins
Interferons
Interleukin 1
Interleukin 11
Interleukin 12
Interleukin 1.alpha.
Interleukin 2
Interleukin 3
Interleukin 4
Interleukin 5
Interleukin 6
Interleukin 7
Interleukin 8
Interleukin 9
Interleukins
Leukemia inhibitory factor
Lymphotoxin
Organic compounds, analysis
Platelet-derived growth factors
Proteins
Stem cell factor
Transforming growth factors
Tumor necrosis factors
RL: ANT (Analyte); ANST (Analytical study)
(real time **quant. aptamer-PCR** or immuno-**PCR** with detectable non-primer probes)

IT Probes (nucleic acid)
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(real time **quant. aptamer-PCR** or immuno-**PCR** with detectable non-primer probes)

IT Reverse transcription
(use in assay; real time **quant. aptamer-PCR** or immuno-**PCR** with detectable non-primer probes)

IT Fluorescence quenching
(use in detection; real time **quant. aptamer-PCR** or immuno-**PCR** with detectable non-primer probes)

IT Transforming growth factors
RL: ANT (Analyte); ANST (Analytical study)
(.alpha.-; real time **quant. aptamer-PCR** or immuno-**PCR** with detectable non-primer probes)

IT Interferons
RL: ANT (Analyte); ANST (Analytical study)
(.alpha.; real time **quant. aptamer-PCR** or immuno-**PCR** with detectable non-primer probes)

IT Transforming growth factors
RL: ANT (Analyte); ANST (Analytical study)
(.beta.-; real time **quant. aptamer-PCR** or immuno-**PCR** with detectable non-primer probes)

IT Interferons
RL: ANT (Analyte); ANST (Analytical study)
(.beta.; real time **quant. aptamer-PCR** or immuno-**PCR** with detectable non-primer probes)

IT Interferons
RL: ANT (Analyte); ANST (Analytical study)
(.gamma.; real time **quant. aptamer-PCR** or immuno-**PCR** with detectable non-primer probes)

IT 58-85-5, Biotin
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(capture mol. labeled with; real time **quant. aptamer**

-**PCR** or immuno-**PCR** with detectable non-primer probes)

IT 107666-54-6, GnRH-associated peptide
RL: ANT (Analyte); ANST (Analytical study)
(mouse; real time **quant**. **aptamer**-**PCR** or immuno-**PCR** with detectable non-primer probes)

IT 51-48-9, L-Thyroxine, analysis 9002-62-4, Prolactin, analysis 9002-64-6, Parathyroid hormone 9002-67-9, Luteinizing hormone 9002-68-0, Follicle stimulating hormone 9002-69-1, Relaxin 9002-71-5, Thyroid stimulating hormone 9002-72-6, Growth hormone 9004-10-8, Insulin, analysis 9014-42-0, Thrombopoietin 9035-54-5, Placental lactogen 9035-68-1, Proinsulin 9061-61-4, Nerve growth factor 11096-26-7, Erythropoietin 57285-09-3, Inhibin 61912-98-9, Insulin-like growth factor 62031-54-3, Fibroblast growth factor 62683-29-8, Colony stimulating factor 67763-96-6, Insulinlike growth factor-I 67763-97-7, Insulinlike growth factor-II 80497-65-0, Muellerian-inhibiting hormone 81627-83-0, M-CSF 82030-87-3 83869-56-1, Colony-stimulating factor 2 87004-01-1, Prorelaxin 114949-22-3, Activin 127464-60-2, Vascular endothelial growth factor 143011-72-7, G-CSF 143637-12-1, Nerve growth factor B 185857-51-6, Neurturin
RL: ANT (Analyte); ANST (Analytical study)
(real time **quant**. **aptamer**-**PCR** or immuno-**PCR** with detectable non-primer probes)

IT 9013-20-1, Streptavidin
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(support labeled with; real time **quant**. **aptamer**-**PCR** or immuno-**PCR** with detectable non-primer probes)

4 ANSWER 7 OF 12 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
AN 2002170512 EMBASE
TI Bringing picomolar protein detection into proximity.
AU Famulok M.
CS Prof. M. Famulok, Inst. of Organ. Chem./Biochemistry, Universitat Bonn, Gerhard-Domagk-Strasse 1, 53121 Bonn, Germany. m.famulok@uni-bonn.de
SO Nature Biotechnology, (2002) 20/5 (448-449).
Refs: 9
ISSN: 1087-0156 CODEN: NABIF
CY United States
DT Journal; (Short Survey)
FS 029 Clinical Biochemistry
LA English
SL English
AB Combining target recognition by two **aptamers**, enzymatic ligation, and **PCR**, the proximity ligation method enables the detection of minute amounts of proteins.
CT Medical Descriptors:
*protein analysis
polymerase chain reaction
protein function
diagnostic value
diagnostic accuracy
immunoassay
immunodetection
DNA sequence
quantitative assay
human
short survey
priority journal
Drug Descriptors:
***aptamer**
polydeoxyribonucleotide synthase
RN (polydeoxyribonucleotide synthase) 9015-85-4

4 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:304625 CAPLUS
DN 136:365900
ED Entered STN: 23 Apr 2002
TI Novel DNA probes for detection and **quantification** of protein molecules
AU Perlette, John; Li, Jianwei; Fang, Xiaohong; Schuster, Sheldon; Lou, Jane; Tan, Weihong
CS Center for Research at the Bio/nano Interface Department of Chemistry and McKnight Brain Institute, University of Florida, Gainesville, FL, 32611, USA
SO Reviews in Analytical Chemistry (2002), 21(1), 1-14
CODEN: RACYAX; ISSN: 0048-752X
PB Freund Publishing House Ltd.
DT Journal; General Review
LA English
CC 9-0 (Biochemical Methods)
AB A review. Mol. Beacons (MBs), oligonucleotide probes that possess an inherent signal transduction mechanism and operate on the principle of "detection without sepn.", are becoming widely used in detection and **quantification** of biol. significant mols. both in vivo and in vitro. Until recently, MBs were used for oligonucleotide detection, primarily in **PCR** and soln. studies. Here the use of these novel probes for both oligonucleotide and protein detection in complex soln. will be discussed. These probes can be used as substrate for enzyme catalyzed cleavage reactions and allow for direct kinetic anal. of such enzymic activity. Also, we demonstrate the use of these probes for detecting binding events by protein mols. such as SSB (single-stranded binding protein from Escherichia coli) that bind but do not cleave these single stranded fluorescent DNA probes. To further demonstrate the applicability of these probes toward protein detection, we show that MBs can be used to discriminate between isoenzymes of proteins such as lactate dehydrogenase. We will also briefly discuss the development of mol. **aptamer** beacon for specific protein recognition in real-time and in homogeneous solns.
ST review DNA probe **quantification** protein
IT Signal transduction, biological
(DNA probes for detection and **quantification** of protein mols.)
IT Proteins
RL: ANT (Analyte); ANST (Analytical study)
(DNA probes for detection and **quantification** of protein mols.)
IT Probes (nucleic acid)
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(DNA probes for detection and **quantification** of protein mols.)
RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
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4 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:304625 CAPLUS
DN 136:365900
ED Entered STN: 23 Apr 2002
TI Novel DNA probes for detection and **quantification** of protein molecules
AU Perlette, John; Li, Jianwei; Fang, Xiaohong; Schuster, Sheldon; Lou, Jane; Tan, Weihong
CS Center for Research at the Bio/nano Interface Department of Chemistry and McKnight Brain Institute, University of Florida, Gainesville, FL, 32611, USA
SO Reviews in Analytical Chemistry (2002), 21(1), 1-14
CODEN: RACYAX; ISSN: 0048-752X
PB Freund Publishing House Ltd.
DT Journal; General Review
LA English
CC 9-0 (Biochemical Methods)
AB A review. Mol. Beacons (MBs), oligonucleotide probes that possess an inherent signal transduction mechanism and operate on the principle of "detection without sepn.", are becoming widely used in detection and **quantification** of biol. significant mols. both in vivo and in vitro. Until recently, MBs were used for oligonucleotide detection, primarily in **PCR** and soln. studies. Here the use of these novel probes for both oligonucleotide and protein detection in complex soln. will be discussed. These probes can be used as substrate for enzyme catalyzed cleavage reactions and allow for direct kinetic anal. of such enzymic activity. Also, we demonstrate the use of these probes for detecting binding events by protein mols. such as SSB (single-stranded binding protein from Escherichia coli) that bind but do not cleave these single stranded fluorescent DNA probes. To further demonstrate the applicability of these probes toward protein detection, we show that MBs can be used to discriminate between isoenzymes of proteins such as lactate dehydrogenase. We will also briefly discuss the development of mol. **aptamer** beacon for specific protein recognition in real-time and in homogeneous solns.
ST review DNA probe **quantification** protein
IT Signal transduction, biological
(DNA probes for detection and **quantification** of protein mols.)
IT Proteins
RL: ANT (Analyte); ANST (Analytical study)
(DNA probes for detection and **quantification** of protein mols.)
IT Probes (nucleic acid)
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(DNA probes for detection and **quantification** of protein mols.)
RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Bonnet, G; Proc Natl Acad Sci USA 1999, V96, P6171 CAPLUS
(2) Chen, W; Anal Biochem 2000, V280, P166 CAPLUS
(3) Fang, X; Anal Chem 1999, V71, P3101 CAPLUS
(4) Fang, X; Anal Chem 2000, V72, P3280 CAPLUS
(5) Fang, X; Anal Chem 2000, V72, P747A CAPLUS
(6) Fang, X; J Am Chem Soc 1999, V121, P2921 CAPLUS
(7) Kostrikis, L; Science 1998, V279, P1228 CAPLUS
(8) Lakowicz, J; Principles of Fluorescence Spectroscopy, 2nd Ed 1999, P595
(9) Leitch, A; In Situ Hybridization: A Practical Guide 1994, P2
(10) Lewin, S; J Virol 1999, V73, P6099 CAPLUS
(11) Li, J; Angew Chem Int Ed 2000, V39, P1049 CAPLUS
(12) Li, J; Nucleic Acids Research 2000, V28, Pe52 CAPLUS
(13) Liu, X; Anal Biochem 2000, P56

(14) Liu, X; Anal Chem 1999, V71, P5054 CAPLUS
(15) Tan, W; Chem-Eur J 2000, V6, P2
(16) Tyagi, S; Nature Biotech 1996, V14, P303 CAPLUS
(17) Tyagi, S; Nature Biotech 1998, V16, P49 CAPLUS
(18) Vet, J; Proc Natl Acad Sci USA 1999, V96, P6394 CAPLUS
(19) Zhang, P; Angew Chem Int Ed 2001, V40, P402 CAPLUS

L4 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:798544 CAPLUS
DN 135:354954
ED Entered STN: 02 Nov 2001
TI Reusable microarrays for **quantifying** low abundance proteins
IN Drukier, Andrzej K.
PA Biotraces, Inc., USA
SO PCT Int. Appl., 68 pp.
CODEN: PIXXD2
DT Patent
LA English
IC G01N033-543
CC 9-1 (Biochemical Methods)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001081924	A2	20011101	WO 2001-US13025	20010423
	WO 2001081924	A3	20030828		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI WO 2001-US13025 20010423

AB The invention provides protein chip microarrays (P-chips) capable of detecting low abundance proteins from physiol. fluids that exist in concns. smaller than 0.1 pg/mL. **Quantitation** is carried out by detecting multiphoton emitting radioisotopes from the assay. The method of multi photon detection provides P-chips with sensitivity of about 50 fg/mL, i.e. about 1,000 fold better than prior art P-chips. Cost effective reusable P-chips and methods of using them are also provided.

ST reusable microarray **quantifying** low abundance protein
IT Sensors
(MPD (multiphoton detectors); reusable microarrays for **quantifying** low abundance proteins)
IT Leukemia
(acute myelogenous; reusable microarrays for **quantifying** low abundance proteins)
IT Hybridoma
(antibodies for low abundance proteins generated by; reusable microarrays for **quantifying** low abundance proteins)
IT Oligonucleotides
RL: ANT (Analyte); ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
(**aptamers**; reusable microarrays for **quantifying** low abundance proteins)
IT Fluorescent substances
(as labels; reusable microarrays for **quantifying** low abundance proteins)
IT Biotechnology
(biochips, P-chips; reusable microarrays for **quantifying** low abundance proteins)

IT Samples
(biol.; reusable microarrays for **quantifying** low abundance proteins)
IT Antibodies
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(biotinylated; reusable microarrays for **quantifying** low abundance proteins)
IT Proteins, specific or class
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(biotinylated; reusable microarrays for **quantifying** low abundance proteins)
IT DNA
RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)
(complexes, in labeling probes; reusable microarrays for **quantifying** low abundance proteins)
IT Storage
(free radical scavengers in; reusable microarrays for **quantifying** low abundance proteins)
IT Phage display
Phage display library
(in antibody prodn.; reusable microarrays for **quantifying** low abundance proteins)
IT Radical scavengers
(in chip storage; reusable microarrays for **quantifying** low abundance proteins)
IT Proteins, specific or class
RL: ANT (Analyte); ANST (Analytical study)
(labeled, radiolabeled; reusable microarrays for **quantifying** low abundance proteins)
IT Antibodies
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(labeled; reusable microarrays for **quantifying** low abundance proteins)
IT Reagents
RL: ARG (Analytical reagent use); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent); USES (Uses)
(labeling probes; reusable microarrays for **quantifying** low abundance proteins)
IT Analytical apparatus
Microanalysis
(microarray; reusable microarrays for **quantifying** low abundance proteins)
IT Immunoassay
(multiphoton detection-enhanced; reusable microarrays for **quantifying** low abundance proteins)
IT Radionuclides, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(multiphoton-emitting; reusable microarrays for **quantifying** low abundance proteins)
IT Peptide nucleic acids
RL: ARG (Analytical reagent use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(openers; reusable microarrays for **quantifying** low abundance proteins)
IT Extraction
(protein; reusable microarrays for **quantifying** low abundance proteins)
IT Radioactive substances
(proteins labeled with; reusable microarrays for **quantifying**

low abundance proteins)
IT Fractionation
(removal of most abundant proteins; reusable microarrays for **quantifying** low abundance proteins)
IT Biological materials
Blood analysis
Body fluid
Fluorescence quenching
Listeria
Nucleic acid hybridization
PCR (polymerase chain reaction)
Radiochemical analysis
Resonant energy transfer
(reusable microarrays for **quantifying** low abundance proteins)
IT Cytokines
RL: ANT (Analyte); ANST (Analytical study)
(reusable microarrays for **quantifying** low abundance proteins)
IT Antibodies
RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic preparation); DEV (Device component use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(reusable microarrays for **quantifying** low abundance proteins)
IT Interleukin 10
Interleukin 11
Interleukin 12
Interleukin 1.beta.
Interleukin 4
Interleukin 6
RL: ANT (Analyte); BOC (Biological occurrence); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence)
(reusable microarrays for **quantifying** low abundance proteins)
IT Proteins, general, analysis
RL: ANT (Analyte); BOC (Biological occurrence); BSU (Biological study, unclassified); REM (Removal or disposal); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(reusable microarrays for **quantifying** low abundance proteins)
IT Avidins
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(reusable microarrays for **quantifying** low abundance proteins)
IT Enzymes, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); NUU (Other use, unclassified); BIOL (Biological study); USES (Uses)
(reusable microarrays for **quantifying** low abundance proteins)
IT 9013-20-1D, Streptavidin, conjugates with iodine-123 15715-08-9D, Iodine-123, conjugates with streptavidin, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(in biotinylated proteins labeling; reusable microarrays for **quantifying** low abundance proteins)
IT 15715-08-9, Iodine-123, analysis
RL: ANT (Analyte); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent)
(proteins labeled with; reusable microarrays for **quantifying** low abundance proteins)
IT 58-85-5D, Biotin, conjugates
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(reusable microarrays for **quantifying** low abundance proteins)
IT 157885-16-0, Neutravidin
RL: ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
(reusable microarrays for **quantifying** low abundance proteins)

IT 9075-08-5, Restriction endonuclease
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); NUU (Other use, unclassified); BIOL (Biological study); USES (Uses)
(reusable microarrays for **quantifying** low abundance proteins)

IT 103780-20-7, Restriction endonuclease Not I
RL: NUU (Other use, unclassified); USES (Uses)
(reusable microarrays for **quantifying** low abundance proteins)

IT 84070-87-1 108273-79-6 372022-76-9 372022-77-0 372022-78-1 372022-79-2 372022-80-5
RL: PRP (Properties)
(unclaimed sequence; reusable microarrays for **quantifying** low abundance proteins)

4 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:304625 CAPLUS
DN 136:365900
ED Entered STN: 23 Apr 2002
TI Novel DNA probes for detection and **quantification** of protein molecules
AU Perlette, John; Li, Jianwei; Fang, Xiaohong; Schuster, Sheldon; Lou, Jane; Tan, Weihong
CS Center for Research at the Bio/nano Interface Department of Chemistry and McKnight Brain Institute, University of Florida, Gainesville, FL, 32611, USA
SO Reviews in Analytical Chemistry (2002), 21(1), 1-14
CODEN: RACYAX; ISSN: 0048-752X
PB Freund Publishing House Ltd.
DT Journal; General Review
LA English
CC 9-0 (Biochemical Methods)
AB A review. Mol. Beacons (MBs), oligonucleotide probes that possess an inherent signal transduction mechanism and operate on the principle of "detection without sepn.", are becoming widely used in detection and **quantification** of biol. significant mols. both in vivo and in vitro. Until recently, MBs were used for oligonucleotide detection, primarily in **PCR** and soln. studies. Here the use of these novel probes for both oligonucleotide and protein detection in complex soln. will be discussed. These probes can be used as substrate for enzyme catalyzed cleavage reactions and allow for direct kinetic anal. of such enzymic activity. Also, we demonstrate the use of these probes for detecting binding events by protein mols. such as SSB (single-stranded binding protein from Escherichia coli) that bind but do not cleave these single stranded fluorescent DNA probes. To further demonstrate the applicability of these probes toward protein detection, we show that MBs can be used to discriminate between isoenzymes of proteins such as lactate dehydrogenase. We will also briefly discuss the development of mol. **aptamer** beacon for specific protein recognition in real-time and in homogeneous solns.
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IT Signal transduction, biological
(DNA probes for detection and **quantification** of protein mols.)
IT Proteins
RL: ANT (Analyte); ANST (Analytical study)
(DNA probes for detection and **quantification** of protein mols.)
IT Probes (nucleic acid)
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
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L4 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:798544 CAPLUS
DN 135:354954
ED Entered STN: 02 Nov 2001
TI Reusable microarrays for **quantifying** low abundance proteins
IN Drukier, Andrzej K.
PA Biotraces, Inc., USA
SO PCT Int. Appl., 68 pp.
CODEN: PIXXD2
DT Patent
LA English
IC G01N033-543
CC 9-1 (Biochemical Methods)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001081924	A2	20011101	WO 2001-US13025	20010423
	WO 2001081924	A3	20030828		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI WO 2001-US13025 20010423

AB The invention provides protein chip microarrays (P-chips) capable of detecting low abundance proteins from physiol. fluids that exist in concns. smaller than 0.1 pg/mL. **Quantitation** is carried out by detecting multiphoton emitting radioisotopes from the assay. The method of multi photon detection provides P-chips with sensitivity of about 50 fg/mL, i.e. about 1,000 fold better than prior art P-chips. Cost effective reusable P-chips and methods of using them are also provided.

ST reusable microarray **quantifying** low abundance protein
IT Sensors
(MPD (multiphoton detectors); reusable microarrays for **quantifying** low abundance proteins)
IT Leukemia
(acute myelogenous; reusable microarrays for **quantifying** low abundance proteins)
IT Hybridoma
(antibodies for low abundance proteins generated by; reusable microarrays for **quantifying** low abundance proteins)
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RL: ANT (Analyte); ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
(**aptamers**; reusable microarrays for **quantifying** low abundance proteins)
IT Fluorescent substances
(as labels; reusable microarrays for **quantifying** low abundance proteins)
IT Biotechnology
(biochips, P-chips; reusable microarrays for **quantifying** low abundance proteins)

IT Samples
(biol.; reusable microarrays for **quantifying** low abundance proteins)
IT Antibodies
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(biotinylated; reusable microarrays for **quantifying** low abundance proteins)
IT Proteins, specific or class
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(biotinylated; reusable microarrays for **quantifying** low abundance proteins)
IT DNA
RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)
(complexes, in labeling probes; reusable microarrays for **quantifying** low abundance proteins)
IT Storage
(free radical scavengers in; reusable microarrays for **quantifying** low abundance proteins)
IT Phage display
Phage display library
(in antibody prodn.; reusable microarrays for **quantifying** low abundance proteins)
IT Radical scavengers
(in chip storage; reusable microarrays for **quantifying** low abundance proteins)
IT Proteins, specific or class
RL: ANT (Analyte); ANST (Analytical study)
(labeled, radiolabeled; reusable microarrays for **quantifying** low abundance proteins)
IT Antibodies
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(labeled; reusable microarrays for **quantifying** low abundance proteins)
IT Reagents
RL: ARG (Analytical reagent use); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent); USES (Uses)
(labeling probes; reusable microarrays for **quantifying** low abundance proteins)
IT Analytical apparatus
Microanalysis
(microarray; reusable microarrays for **quantifying** low abundance proteins)
IT Immunoassay
(multiphoton detection-enhanced; reusable microarrays for **quantifying** low abundance proteins)
IT Radionuclides, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(multiphoton-emitting; reusable microarrays for **quantifying** low abundance proteins)
IT Peptide nucleic acids
RL: ARG (Analytical reagent use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(openers; reusable microarrays for **quantifying** low abundance proteins)
IT Extraction
(protein; reusable microarrays for **quantifying** low abundance proteins)
IT Radioactive substances
(proteins labeled with; reusable microarrays for **quantifying**

low abundance proteins)

IT Fractionation
(removal of most abundant proteins; reusable microarrays for **quantifying** low abundance proteins)

IT Biological materials
Blood analysis
Body fluid
Fluorescence quenching
Listeria
Nucleic acid hybridization
PCR (polymerase chain reaction)
Radiochemical analysis
Resonant energy transfer
(reusable microarrays for **quantifying** low abundance proteins)

IT Cytokines
RL: ANT (Analyte); ANST (Analytical study)
(reusable microarrays for **quantifying** low abundance proteins)

IT Antibodies
RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic preparation); DEV (Device component use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(reusable microarrays for **quantifying** low abundance proteins)

IT Interleukin 10
Interleukin 11
Interleukin 12
Interleukin 1.beta.
Interleukin 4
Interleukin 6
RL: ANT (Analyte); BOC (Biological occurrence); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence)
(reusable microarrays for **quantifying** low abundance proteins)

IT Proteins, general, analysis
RL: ANT (Analyte); BOC (Biological occurrence); BSU (Biological study, unclassified); REM (Removal or disposal); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(reusable microarrays for **quantifying** low abundance proteins)

IT Avidins
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(reusable microarrays for **quantifying** low abundance proteins)

IT Enzymes, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); NUU (Other use, unclassified); BIOL (Biological study); USES (Uses)
(reusable microarrays for **quantifying** low abundance proteins)

IT 9013-20-1D, Streptavidin, conjugates with iodine-123 15715-08-9D, Iodine-123, conjugates with streptavidin, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(in biotinylated proteins labeling; reusable microarrays for **quantifying** low abundance proteins)

IT 15715-08-9, Iodine-123, analysis
RL: ANT (Analyte); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent)
(proteins labeled with; reusable microarrays for **quantifying** low abundance proteins)

IT 58-85-5D, Biotin, conjugates
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(reusable microarrays for **quantifying** low abundance proteins)

IT 157885-16-0, Neutravidin
RL: ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
(reusable microarrays for **quantifying** low abundance proteins)

IT 9075-08-5, Restriction endonuclease
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); NUU (Other use, unclassified); BIOL (Biological study); USES (Uses)
(reusable microarrays for **quantifying** low abundance proteins)
IT 103780-20-7, Restriction endonuclease Not I
RL: NUU (Other use, unclassified); USES (Uses)
(reusable microarrays for **quantifying** low abundance proteins)
IT 84070-87-1 108273-79-6 372022-76-9 372022-77-0 372022-78-1 372022-79-2 372022-80-5
RL: PRP (Properties)
(unclaimed sequence; reusable microarrays for **quantifying** low abundance proteins)

L4 ANSWER 10 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:618196 CAPLUS
DN 135:192527
ED Entered STN: 24 Aug 2001
TI Methods and kits for proximity probing
IN Landegren, Ulf; Fredriksson, Simon
PA Swed.
SO PCT Int. Appl., 33 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C12Q001-68
ICS G01N033-536
CC 9-16 (Biochemical Methods)
Section cross-reference(s): 1, 3, 17
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001061037	A1	20010823	WO 2001-SE341	20010216
	W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	SE 2000000538	A	20010819	SE 2000-538	20000218
	SE 516272	C2	20011210		
	EP 1255861	A1	20021113	EP 2001-906476	20010216
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2003524419	T2	20030819	JP 2001-559873	20010216
	US 2002064779	A1	20020530	US 2001-785657	20010220
PRAI	SE 2000-538	A	20000218		
	US 2000-183371P	P	20000218		
	WO 2001-SE341	W	20010216		

AB The present invention relates to sensitive, rapid and convenient assays for detection and/or **quantification** of one or several analyte(s) in soln. using so called proximity probes. The proximity probes comprise a binding moiety and a nucleic acid. The nucleic acid from one proximity probe is only capable of interaction with the nucleic acid from the other proximity probe when these are in close proximity, i.e. have bound to the analytes for which they are specific. The present invention relates to methods and kits for proximity probing and are performed in soln. without the need of a solid phase.

ST test kit proximity probe antibody **aptamer** library pathogen food

IT Ligands
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(-receptor interaction antagonists; methods and kits for proximity probing)

IT Platelet-derived growth factors
RL: ANT (Analyte); ANST (Analytical study)
(BB; methods and kits for proximity probing)

IT Prion proteins
RL: ANT (Analyte); ANST (Analytical study)
(PrPSc; methods and kits for proximity probing)

IT Proteins, general, analysis
RL: ANT (Analyte); ANST (Analytical study)
(aggregates; methods and kits for proximity probing)

IT Peptides, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(**aptamer**; methods and kits for proximity probing)

IT Receptors
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(cell surface, sol.; methods and kits for proximity probing)

IT Immunoglobulins
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(fragments, Fc; methods and kits for proximity probing)

IT Pathogen
(infectious agents; methods and kits for proximity probing)

IT Affinity
Animal
Combinatorial library
Dimerization
Drug screening
Feed analysis
Food analysis
Nucleic acid amplification (method)
Nucleic acid hybridization
Nucleic acid library
PCR (polymerase chain reaction)
Phage display library
Ribosome
Solutions
Test kits
(methods and kits for proximity probing)

IT Nucleic acids
RL: ANT (Analyte); ANST (Analytical study)
(methods and kits for proximity probing)

IT Proteins, general, analysis
RL: ANT (Analyte); ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(methods and kits for proximity probing)

IT Agglutinins and Lectins
Antibodies
Carbohydrates, uses
Primers (nucleic acid)
Probes (nucleic acid)
Reagents
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(methods and kits for proximity probing)

IT Antibodies
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(monoclonal; methods and kits for proximity probing)

IT Genetic methods
(ribosome display; methods and kits for proximity probing)

IT 9015-85-4, DNA ligase

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(methods and kits for proximity probing)

IT 355887-88-6, 1: PN: WO0161037 PAGE: 13 unclaimed DNA 355887-89-7, 2: PN: WO0161037 PAGE: 13 unclaimed DNA 355887-90-0 355887-91-1 355887-92-2 355887-93-3
RL: PRP (Properties)
(unclaimed nucleotide sequence; methods and kits for proximity probing)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Applied Biosystems Inc; EP 0185494 A2 1986 CAPLUS
(2) Biotechnica International Inc; EP 0320308 A2 1989 CAPLUS
(3) Cytocell Limited; WO 9306240 A1 1993 CAPLUS
(4) David, S; US 5846709 A 1998 CAPLUS
(5) Evotec Biosystems Ag; WO 0123894 A1 2001 CAPLUS
(6) Landgren; WO 9700446 A1 1997 CAPLUS